

App. No. 09/558,871

Art Unit 3762

P-8873.00

**REMARKS**

Claims 10, 46 and 56 have been amended. Claims 1-58 remain pending in the application. The applicant hereby requests further examination and reconsideration of the application in view of the foregoing amendments and following response.

***Claim Objections***

Claims 10, 46 and 56 stand objected based on informalities identified by the examiner. Applicant believes the informalities have been corrected; therefore, the applicant requests the examiner to withdraw the objection.

***Claim Rejections – 35 USC § 102***

Claims 1, 2, 4-6, 9, 15-16, 20-21, 24, 31-34, 37, 43-44, 48-49 and 52 stand rejected under 35 U.S.C. 102(e) as being anticipated by Levine et al. (6,058,328). Claim 1 recites a "T-wave analyzer, responsive to sensor, that evaluates cardiac risk based on comparison of the indication of T-wave alternans to predetermined criterion." Applicant respectfully submits that Levine et al. teach a "'P-wave' analyzer to analyze the heart at a time in the cardiac cycle that is just prior to the time when a spontaneous atrial depolarization, referred to herein as a 'P-wave', would otherwise occur." col 3, lines 17-20. The applicant claims a "T-wave analyzer to analyze "T-wave alternans by reference to portions of the electrocardiogram incorporating the T-wave. . . ." It is submitted that Levine et al. do not teach the claimed invention; therefore, the applicant respectfully request the examiner to withdraw the rejection. Accordingly, the applicant believes that independent claims 1, 16, 31, and 44 are in condition for allowance along with the claim dependent thereon.

***Claim Rejections – 35 USC § 103***

Claims 19 and 47 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Levine et al. (6,058,328) in view of KenKnight (6,148,230). Since claims 19 and 47 are dependent upon claims now believed to be allowable as discussed above, applicant submits that claims 19 and 47 are also allowable.

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*Allowable Subject Matter*

Claims 3, 7-8, 10-14, 17-18, 22-23, 25-30, 35-36, 38-42, 45-46, 50-51 and 53-58 stand objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Since applicant believes the base claims are in condition for allowance, applicant submits that claims 3, 7-8, 10-14, 17-18, 22-23, 25-30, 35-36, 38-42, 45-46, 50-51 and 53-58 are also in condition for allowance.

In view of the above, it is submitted that all claims pending in the application are in condition for allowance. Accordingly, allowance of claims 1-58 is respectfully requested. Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with me concerning any subject matter of this application by electronic mail at the address below. I understand that a copy of these communications will be made of record in the application file. M.P.E.P. § 502.03.

Respectfully submitted,

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## PATENT RECORD SEARCH

| Docket No.  | Ctry | Rel. | Rel. # | Type | Status | Group | Div.  | Attorney | ADD No                   | Pat No. |
|---|------|------|--------|------|--------|-------|-------|----------|--------------------------|---------|
| P10029.00   | US   |      |        | F    |        |       | LW091 | TFW      | 10/127,034<br>04/22/2002 |         |
| Agent:<br>TITLE: PERCISE CARDIAC LEAD PLACEMENT BASED ON IMPEDANCE MEASUREMENTS<br>INVENTORS: Smits, Karel F.A.A.<br>Struble, Chester L.  |      |      |        |      |        |       |       |          |                          |         |
| P10157.00   | US   |      |        | F    |        |       | LW091 | TFW      | 10/127,037<br>04/22/2002 |         |
| Agent:<br>TITLE: CARDIAC RESYNCHRONIZATION WITH ADAPTIVE A1-A2 AND OR V1-V2 INTERVALS<br>INVENTORS: Grandjean, Pierre A.<br>Struble, Chester L.                                     |      |      |        |      |        |       |       |          |                          |         |
| P10183.00   | US   |      |        | F    |        |       | LW091 | TFW      | 09/897,291<br>06/29/2001 |         |
| Agent:<br>TITLE: CATHETER SYSTEM HAVING DISPOSABLE BALLOON<br>INVENTORS: Greco, Francesco<br>Jorgensen, Kenneth<br>Nielsen, Marianne<br>Pedersen, Anders Kirstein<br>Aundal, Knud   |      |      |        |      |        |       |       |          |                          |         |
| P10194.00   | US   |      |        | F    |        |       | LW091 | TFW      | 10/126,733<br>04/22/2002 |         |
| Agent:<br>TITLE: ESTIMATION OF STROKE VOLUME AND CARDIAC OUTPUT USING AN INTRACARDIAL PRESSURE SENSOR<br>INVENTORS: Muhlenberg, Lambert<br>Struble, Chester L.                      |      |      |        |      |        |       |       |          |                          |         |
| P10282.00   | US   |      |        | F    |        |       | LW091 | TFW      | 10/126,710<br>04/22/2002 |         |
| Agent:<br>TITLE: CARDIAC OUTPUT MEASUREMENT USING DUAL OXYGEN SENSORS IN RIGHT AND LEFT VENTRICLES<br>INVENTORS: Struble, Chester L.<br>Muhlenberg, Lambert<br>Grandjean, Pierre A. |      |      |        |      |        |       |       |          |                          |         |
| P10283.00   | US   |      |        | F    |        |       | LW091 | TFW      | 10/126,816<br>04/22/2002 |         |
| Agent:<br>TITLE: ORGANIZING DATA ACCORDING TO CARDIAC RHYTHM TYPE<br>INVENTORS: Struble, Chester L.<br>Muhlenberg, Lambert<br>Grandjean, Pierre A.                                  |      |      |        |      |        |       |       |          |                          |         |
| P10321.00   | US   |      |        | F    |        |       | LW091 | TFW      | 10/127,038<br>04/22/2002 |         |
| Agent:<br>TITLE: ATRIOVENTRICULAR DELAY ADJUSTMENT<br>INVENTORS: Struble, Chester L.<br>Muhlenberg, Lambert   |      |      |        |      |        |       |       |          |                          |         |
| P10344.00   | US   |      |        | F    |        |       | LW091 | TFW      | 10/126,638<br>04/22/2002 |         |
| Agent:<br>TITLE: SEAMLESS COMMUNICATION BETWEEN AN IMPLANTABLE MEDICAL DEVICE AND A REMOTE SYSTEM<br>INVENTORS: Houben, Richard P M<br>Donders, Adrianus P. (Jos)                   |      |      |        |      |        |       |       |          |                          |         |
| P10346.00   | US   |      |        | L    | F      |       | LW091 | TFW      | 60/331,543<br>11/19/2001 |         |
| Agent:<br>TITLE: METHOD FOR NON-INVASIVE FETAL CARDIAC PACING<br>INVENTORS: Eick, Olaf J.<br>Miehaus, Michael<br>Houben, Richard P M  |      |      |        |      |        |       |       |          |                          |         |

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|---|------|------|--------|------|--------|-------|-------|----------|--------------------------|---------|
| P10408.00   | US   |      |        | F    |        |       | LW091 | TFW      | 10/133,466<br>04/29/2002 |         |
| Agent:<br>TITLE: STIMULATION CONTROL FOR BRAIN STIMULATION<br>INVENTORS: Gielen, Frans L H  |      |      |        |      |        |       |       |          |                          |         |
| P10410.00   | US   |      |        | L    | P      |       | LW091 | TFW      | 60/333,473<br>11/28/2001 |         |
| Agent:<br>TITLE: METHOD TO SENSE A BRAIN SIGNAL CORRESPONDING TO PERCEPTION OF PAIN AND USE AS<br>FEEDBACK TO CONTROL A BRAIN NEUROSTIMULATOR, DRUG INFUSION DEVICE, OR OTHER<br>MEDICAL DEVICE<br>INVENTORS: Mullett, Keith R. |      |      |        |      |        |       |       |          |                          |         |
| P10410.00   | US   |      |        | F    |        |       | LW091 | TFW      | 10/132,508<br>04/26/2002 |         |
| Agent:<br>TITLE: BRAIN SIGNAL FEEDBACK FOR PAIN MANAGEMENT<br>INVENTORS: Mullett, Keith R.  |      |      |        |      |        |       |       |          |                          |         |
| P10438.00   | US   |      |        | P    |        |       | LW091 | TFW      | 10/131,261<br>04/25/2002 |         |
| Agent:<br>TITLE: IMPLANTABLE ELECTROPORTION THERAPY DEVICE AND METHOD FOR USING SAME<br>INVENTORS: Perak-Petric, Bozidar  |      |      |        |      |        |       |       |          |                          |         |
| P10489.00   | US   |      |        | L    | P      |       | LW091 | TFW      | 60/336,728<br>12/07/2001 |         |
| Agent:<br>TITLE: PRECORDIAL SUPERIOR VENA CAVA ELECTRODE ARRANGEMENT FOR AN IMPLANTABLE<br>CARDIOVERTER DEFIBRILLATOR<br>INVENTORS: Smits, Karel F.A.A.   |      |      |        |      |        |       |       |          |                          |         |
| P10498.00   | US   |      |        | L    | P      |       | LW091 | TFW      | 60/375,080<br>04/25/2002 |         |
| Agent:<br>TITLE: PACEMAKER BLANKING BY MAGNETIC RESONANCE IMAGING (MRI) DEVICE<br>INVENTORS: Zeijlemaker, Volkert A   |      |      |        |      |        |       |       |          |                          |         |
| P10499.00   | US   |      |        | L    | P      |       | LW091 | TFW      | 60/375,076<br>04/25/2002 |         |
| Agent:<br>TITLE: MAGNETIC RESONANCE IMAGING (MRI) TRIGGERED BY THE IMPLANTING PACING SYSTEM<br>INVENTORS: Zeijlemaker, Volkert A  |      |      |        |      |        |       |       |          |                          |         |
| P10500.00   | US   |      |        | L    | P      |       | LW091 | TFW      | 60/375,077<br>04/25/2002 |         |
| Agent:<br>TITLE: TELEMETRY BLANKING FOR PACEMAKERS AND ICDs BY MAGNETIC RESONANCE IMAGING (MRI)<br>DEVICES<br>INVENTORS: Zeijlemaker, Volkert A   |      |      |        |      |        |       |       |          |                          |         |
| P10512.00   | US   |      |        | L    | P      |       | LW091 | TFW      | 60/375,081<br>04/25/2002 |         |
| Agent:<br>TITLE: EXTERNAL PUMP CONTROLLER<br>INVENTORS: Donders, Adrianus P. (Jos)<br>Houben, Richard P M   |      |      |        |      |        |       |       |          |                          |         |
| P4059.01  | US   |      |        | P    |        |       | LW091 | TFW      | 09/558,869<br>04/28/2000 |         |
| Agent: Frank B. Dehn & Co.<br>TITLE: METHOD AND APPARATUS FOR INHIBITING OR MINIMIZING CALCIFICATION OF AORTIC VALVES<br>INVENTORS: Sutton, Richard   |      |      |        |      |        |       |       |          |                          |         |
| P4517.00  | US   |      |        | F    |        |       | LW091 | TFW      | 09/542,258<br>04/03/2000 |         |
| Agent:<br>TITLE: DUAL CHAMBER PACING SYSTEM HAVING TIME-ADAPTIVE AV DELAY<br>INVENTORS: Struble, Chester L.<br>Heynen, Henri G.   |      |      |        |      |        |       |       |          |                          |         |

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| Docket No.   | Ctry | Rel. | Rel. # | Type | Status | Group | Div.  | Attorney | App No                   | Pat No. |
|--|------|------|--------|------|--------|-------|-------|----------|--------------------------|---------|
| P4566.00   | US   |      |        |      | P      |       | LW091 | TFW      | 09/721,881<br>11/27/2000 |         |
| Agent:<br>TITLE: STENTS AND METHODS FOR PREPARING STENTS FROM WIRES HAVING HYDROGEL COATING LAYERS THEREON<br>INVENTORS: Verhoeven, Michel<br>Cahalan, Patrick T.<br>Cahalan, Linda L.<br>Larik, Vincent |      |      |        |      |        |       |       |          |                          |         |
| P4782.03   | US   | C    | 01     | M    | F      |       | LW091 | TFW      | 09/494,531<br>01/31/2000 |         |
| Agent:<br>TITLE: SYSTEM AND METHOD FOR RESPIRATION - MODULATED PACING<br>INVENTORS: Renirie, Alexis C.M.<br>Schouten, Vincent JA   |      |      |        |      |        |       |       |          |                          |         |
| P4971.04   | US   | C    | 01     | M    | F      |       | LW091 | TFW      | 09/433,567<br>11/04/1999 |         |
| Agent:<br>TITLE: SYSTEM FOR PANCREATIC STIMULATION AND GLUCOSE MEASUREMENT<br>INVENTORS: Houben, Richard P M<br>Renirie, Alexis C.M.<br>Weijand, Koen J.   |      |      |        |      |        |       |       |          |                          |         |
| P4971.05   | US   | D    | 02     |      | F      |       | LW091 | TFW      | 09/551,216<br>04/17/2000 |         |
| Agent:<br>TITLE: A SYSTEM FOR DELIVERING INSULIN<br>INVENTORS: Houben, Richard P M<br>Renirie, Alexis C.M.<br>Weijand, Koen J.   |      |      |        |      |        |       |       |          |                          |         |
| P4971.07   | US   | C    | 02     |      | F      |       | LW091 | TFW      | 09/945,686<br>09/05/2001 |         |
| Agent:<br>TITLE: SYSTEM FOR PANCREATIC STIMULATION AND GLUCOSE MEASUREMENT<br>INVENTORS: Houben, Richard P M<br>Renirie, Alexis C.M.<br>Weijand, Koen J.   |      |      |        |      |        |       |       |          |                          |         |
| P7322.02   | US   | D    | 01     |      | F      |       | LW091 | TFW      | 09/558,872<br>04/28/2000 |         |
| Agent:<br>TITLE: IMPLANTABLE DRUG INFUSION DEVICE HAVING A FLOW REGULATOR<br>INVENTORS: Renaud, Philippe<br>Haller, Markus<br>Amacker, Christian   |      |      |        |      |        |       |       |          |                          |         |
| P7322.04   | US   | C    | 01     |      | F      |       | LW091 | TFW      | 09/712,237<br>11/15/2000 |         |
| Agent:<br>TITLE: IMPLANTABLE DRUG INFUSION DEVICE HAVING A FLOW REGULATOR<br>INVENTORS: Renaud, Philippe<br>Haller, Markus<br>Amacker, Christian   |      |      |        |      |        |       |       |          |                          |         |
| P7326.02   | US   | D    | 01     | M    | F      |       | LW091 | TFW      | 09/273,457<br>03/22/1999 |         |
| Agent:<br>TITLE: MEDICAL ELECTRICAL LEAD<br>INVENTORS: Wolosko, Jean<br>Camps, Antoine N J M (Toine)<br>Van Der Kruk, Ron  |      |      |        |      |        |       |       |          |                          |         |
| P7354.02   | US   | P    | 01     | M    | F      |       | LW091 | TFW      | 09/494,530<br>01/31/2000 |         |
| Agent:<br>TITLE: SAFETY VALVE ASSEMBLY FOR IMPLANTABLE BENEFICIAL AGENT INFUSION DEVICE<br>INVENTORS: Haller, Markus<br>Weijand, Koen J.   |      |      |        |      |        |       |       |          |                          |         |

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|---|------|------|--------|------|--------|-------|-------|----------|--------------------------|---------|
| P7354.03  | US   | P    | 02     |      | P      |       | LW091 | TFW      | 09/519,563<br>03/06/2000 |         |
| Agent: Agent Ref. No:<br>TITLE: DRIVE CIRCUIT HAVING IMPROVED ENERGY EFFICIENCY FOR IMPLANTABLE BENEFICIAL AGENT<br>INFUSION OR DELIVERY DEVICE<br>INVENTORS: Haller, Markus<br>Weijand, Koen J.  |      |      |        |      |        |       |       |          |                          |         |
| P7354.06  | US   | D    | 01     |      | P      |       | LW091 | TFW      | 10/132,515<br>04/26/2002 |         |
| Agent: Agent Ref. No:<br>TITLE: SAFETY VALVE ASSEMBLY FOR IMPLANTABLE BENEFICIAL AGENT INFUSION DEVICE<br>INVENTORS: Haller, Markus<br>Weijand, Koen J.   |      |      |        |      |        |       |       |          |                          |         |
| P7354.07  | US   | D    | 02     |      | P      |       | LW091 | TFW      | 10/132,514<br>04/26/2002 |         |
| Agent: Agent Ref. No:<br>TITLE: SAFETY VALVES ASSEMBLY FOR IMPLANTABLE BENEFICIAL AGENT INFUSION DEVICE<br>INVENTORS: Haller, Markus<br>Weijand, Koen J.  |      |      |        |      |        |       |       |          |                          |         |
| P7438.06  | US   | P    | 01     |      | P      |       | LW091 | TFW      | 09/871,657<br>06/04/2001 |         |
| Agent: Agent Ref. No:<br>TITLE: DEVICES, SYSTEMS AND METHODS FOR TRANSLUMINALLY AND CONTROLLABLY FORMING<br>INTRAMYOCARDIAL CHANNELS IN CARDIAC TISSUE<br>INVENTORS: Dietz, Ulrich<br>Eick, Olaf J.<br>Duyssens, Victor<br>Darius, Harold |      |      |        |      |        |       |       |          |                          |         |
| P7492.01  | US   | D    | 01     |      | P      |       | LW091 | TFW      | 09/746,011<br>12/26/2000 |         |
| Agent: Agent Ref. No:<br>TITLE: LAMINA PROSTHESIS FOR DELIVERY OF MEDICAL TREATMENT<br>INVENTORS: Gielen, Frans L H<br>Knuth, Henricus M.   |      |      |        |      |        |       |       |          |                          |         |
| P7492.02  | US   | D    | 02     |      | P      |       | LW091 | TFW      | 09/746,021<br>12/26/2000 |         |
| Agent: Agent Ref. No:<br>TITLE: LAMINA PROSTHESIS FOR DELIVERY OF MEDICAL TREATMENT<br>INVENTORS: Gielen, Frans L H<br>Knuth, Henricus M.   |      |      |        |      |        |       |       |          |                          |         |
| P7553.00  | US   |      |        |      | P      |       | LW091 | TFW      | 09/433,564<br>11/04/1999 |         |
| Agent: Agent Ref. No:<br>TITLE: BIOLOGICAL TISSUE ADHESIVES, ARTICLES, AND METHODS<br>INVENTORS: Hendriks, Marc<br>Verhoeven, Michel<br>Cahalan, Patrick T.<br>Larik, Vincent   |      |      |        |      |        |       |       |          |                          |         |
| P7553.01  | US   | D    | 01     |      | P      |       | LW091 | TFW      | 10/132,516<br>04/26/2002 |         |
| Agent: Agent Ref. No:<br>TITLE: BIOLOGICAL TISSUE ADHESIVES, ARTICLES, AND METHODS<br>INVENTORS: Hendriks, Marc<br>Verhoeven, Michel<br>Cahalan, Patrick T.<br>Larik, Vincent   |      |      |        |      |        |       |       |          |                          |         |

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|---|------|------|--------|------|--------|-------|-------|----------|--------------------------|---------|
| P7563.00  | US   |      |        | F    |        |       | LW091 | TFW      | 09/340,440<br>06/28/1999 |         |
| Agent: Agent Ref. No:<br>TITLE: IMPLANTABLE DEVICE INCLUDING A POLYAMINO ACID COMPONENT<br>INVENTORS: Larik, Vincent<br>Hendriks, Marc<br>Cahalan, Patrick T.<br>Verhoeven, Michel<br>Cahalan, Linda L. |      |      |        |      |        |       |       |          |                          |         |
| P7640.08  | US   | D    | 06     | F    |        |       | LW091 | TFW      | 09/946,495<br>09/06/2001 |         |
| Agent: Agent Ref. No:<br>TITLE: FOUR-CHAMBER PACING SYSTEM FOR OPTIMIZING CARDIAC OUTPUT AND DETERMINING<br>HEART CONDITION<br>INVENTORS: Leinders, Robert<br>Bakels, Arnoldus P.<br>DeRoos, Cobus      |      |      |        |      |        |       |       |          |                          |         |
| P7718.00  | US   |      |        | F    |        |       | LW091 | TFW      | 09/449,936<br>11/29/1999 |         |
| Agent: Agent Ref. No:<br>TITLE: MEDICAL ELECTRICAL LEAD HAVING BENDING STIFFNESSES WHICH INCREASE IN THE DISTAL<br>DIRECTION<br>INVENTORS: Smits, Karel P.A.A.  |      |      |        |      |        |       |       |          |                          |         |
| P7718.03  | US   | D    | 01     | F    |        |       | LW091 | TFW      | 09/947,060<br>09/06/2001 |         |
| Agent: Agent Ref. No:<br>TITLE: MEDICAL ELECTRICAL LEAD HAVING BENDING STIFFNESSES WHICH INCREASE IN THE DISTAL<br>DIRECTION<br>INVENTORS: Smits, Karel P.A.A.  |      |      |        |      |        |       |       |          |                          |         |
| P7853.01  | US   | D    | 01     | F    |        |       | LW091 | TFW      | 09/832,925<br>04/12/2001 |         |
| Agent: Agent Ref. No:<br>TITLE: APPARATUS AND METHOD FOR MEASURING THE AMOUNT OF FLUID CONTAINED IN AN<br>IMPLANTABLE MEDICAL DEVICE<br>INVENTORS: Peer, Twan<br>Bakels, Arnoldus P.                    |      |      |        |      |        |       |       |          |                          |         |
| P7856.02  | US   | D    | 01     | F    |        |       | LW091 | TFW      | 09/799,709<br>03/07/2001 |         |
| Agent: Agent Ref. No:<br>TITLE: SYSTEM AND METHOD FOR OPTIMIZED BRAIN STIMULATION<br>INVENTORS: Gielen, Frans L H   |      |      |        |      |        |       |       |          |                          |         |
| P7902.00  | US   |      |        | F    |        |       | LW091 | TFW      | 09/340,441<br>06/28/1999 |         |
| Agent: Agent Ref. No:<br>TITLE: METHOD FOR COATING IMPLANTABLE DEVICES<br>INVENTORS: Martinez, Gonzalo<br>Taylor, John J<br>Kearney, Kenneth W.<br>Haller, Markus                                       |      |      |        |      |        |       |       |          |                          |         |
| P7946.00  | US   |      |        | F    |        |       | LW091 | TFW      | 09/779,535<br>02/09/2001 |         |
| Agent: Agent Ref. No:<br>TITLE: METHODS FOR MODIFYING SURFACES OF ARTICLES<br>INVENTORS: Koulik, Edouard<br>Cahalan, Patrick T.<br>Iwata, Hiroo   |      |      |        |      |        |       |       |          |                          |         |
| P8027.00  | US   |      |        | F    |        |       | LW091 | TFW      | 09/348,506<br>07/07/1999 |         |
| Agent: Agent Ref. No:<br>TITLE: SYSTEM FOR REMOTE COMMUNICATION WITH A MEDICAL DEVICE<br>INVENTORS: Perek-Petric, Bozidar   |      |      |        |      |        |       |       |          |                          |         |

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| Docket No.   | Clty | Rel. | Rel. # | Type | Status | Group | Div.  | Attorney | App No                   | Pat No. |
|--|------|------|--------|------|--------|-------|-------|----------|--------------------------|---------|
| P8032.00   | US   |      |        |      | P      |       | LW091 | TFW      | 09/842,404<br>04/26/2001 |         |
| Agent: Agent Ref. No:<br>TITLE: DIAGNOSTIC FEATURES IN BI-ATRIAL AND/OR BI-VENTRICULAR PACING SYSTEMS<br>INVENTORS: Struble, Chester L.                              |      |      |        |      |        |       |       |          |                          |         |
| P8047.00   | US   |      |        |      | P      |       | LW091 | TFW      | 09/518,796<br>03/03/2000 |         |
| Agent: Agent Ref. No:<br>TITLE: SYSTEM AND METHOD FOR MONITORING AND CONTROLLING THE GLYCEMIC STATE OF A PATIENT<br>INVENTORS: Houben, Richard P M<br>Larik, Vincent |      |      |        |      |        |       |       |          |                          |         |
| P8131.00   | US   |      |        |      | F      |       | LW091 | TFW      | 09/558,867<br>04/28/2000 |         |
| Agent: Agent Ref. No:<br>TITLE: CORONARY SINUS FLOW REGULATED PACING<br>INVENTORS: Ferek-Petric, Bozidar   |      |      |        |      |        |       |       |          |                          |         |
| P8158.00   | US   |      |        |      | F      |       | LW091 | TFW      | 09/558,870<br>04/28/2000 |         |
| Agent: Agent Ref. No:<br>TITLE: ISCHEMIC HEART DISEASE DETECTION<br>INVENTORS: Ferek-Petric, Bozidar   |      |      |        |      |        |       |       |          |                          |         |
| P8158.02   | US   | D    | 01     |      | F      |       | LW091 | TFW      | 10/085,072<br>03/01/2002 |         |
| Agent: Agent Ref. No:<br>TITLE: ISCHEMIC HEART DISEASE DETECTION<br>INVENTORS: Ferek-Petric, Bozidar   |      |      |        |      |        |       |       |          |                          |         |
| P8158.03   | US   | D    | 02     |      | F      |       | LW091 | TFW      | 10/085,047<br>03/01/2002 |         |
| Agent: Agent Ref. No:<br>TITLE: ISCHEMIC HEART DISEASE DETECTION<br>INVENTORS: Ferek-Petric, Bozidar   |      |      |        |      |        |       |       |          |                          |         |
| P8191.00   | US   |      |        |      | F      |       | LW091 | TFW      | 09/843,914<br>04/30/2001 |         |
| Agent: Agent Ref. No:<br>TITLE: METHODS FOR ADJUSTING CARDIAC DETECTION CRITERIA AND IMPLANTABLE MEDICAL DEVICES<br>USING SAME<br>INVENTORS: Ferek-Petric, Bozidar   |      |      |        |      |        |       |       |          |                          |         |
| P8240.00   | US   |      |        |      | F      |       | LW091 | TFW      | 09/779,536<br>02/09/2001 |         |
| Agent: Agent Ref. No:<br>TITLE: HEPARIN COMPOSITIONS AND METHODS OF MAKING AND USING THE SAME<br>INVENTORS: Koulik, Edouard  |      |      |        |      |        |       |       |          |                          |         |
| P8278.00   | US   |      |        |      | F      |       | LW091 | TFW      | 09/842,879<br>04/27/2001 |         |
| Agent: Agent Ref. No:<br>TITLE: CONTROL OF PACING RATE IN MODE SWITCHING IMPLANTABLE MEDICAL DEVICES<br>INVENTORS: Struble, Chester L.<br>Dunham, David              |      |      |        |      |        |       |       |          |                          |         |
| P8279.00   | US   |      |        |      | F      |       | LW091 | TFW      | 09/842,884<br>04/27/2001 |         |
| Agent: Agent Ref. No:<br>TITLE: COMMITTED VENTRICULAR SAFETY PACING<br>INVENTORS: Struble, Chester L.  |      |      |        |      |        |       |       |          |                          |         |
| P8382.00   | US   |      |        |      | F      |       | LW091 | TFW      | 09/842,233<br>04/26/2001 |         |
| Agent: Agent Ref. No:<br>TITLE: HYSTERESIS ACTIVATION OF ACCELERATED PACING<br>INVENTORS: Struble, Chester L.<br>Grandjean, Pierre A.                                |      |      |        |      |        |       |       |          |                          |         |



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| P8418.00   | US   |      |        |      | F      |       | LW091 | TFW      | 09/353,619<br>07/15/1999 |         |
| Agent: _____ Agent Ref. No: _____<br>TITLE: SYSTEM FOR PROVIDING MEDICAL ELECTRICAL STIMULATION<br>INVENTORS: Holsheimer, Jan  |      |      |        |      |        |       |       |          |                          |         |
| P8553.00   | US   | P    | 01     |      | F      |       | LW091 | TFW      | 09/519,562<br>03/06/2000 |         |
| Agent: _____ Agent Ref. No: _____<br>TITLE: MEDICAL ELECTRICAL LEAD WITH INTERCHANGEABLE FIXATION MEMBER<br>INVENTORS: Camps, Antoine N J M (Toine)<br>Duysens, Victor<br>Kretzers, Leonardus J. C.<br>Gerber, Martin T.         |      |      |        |      |        |       |       |          |                          |         |
| P8553.01   | US   | D    | 01     |      | F      |       | LW091 | TFW      | 10/132,513<br>04/26/2002 |         |
| Agent: _____ Agent Ref. No: _____<br>TITLE: METHOD OF IMPLANTING A MEDICAL ELECTRICAL LEAD<br>INVENTORS: Camps, Antoine N J M (Toine)<br>Duysens, Victor<br>Kretzers, Leonardus J. C.<br>Gerber, Martin T.                       |      |      |        |      |        |       |       |          |                          |         |
| P8564.00   | US   |      |        |      | F      |       | LW091 | TFW      | 10/131,417<br>04/25/2002 |         |
| Agent: _____ Agent Ref. No: _____<br>TITLE: VENTRICULAR SAFETY PACING IN BIVENTRICULAR PACING<br>INVENTORS: Kramm, Berthold  |      |      |        |      |        |       |       |          |                          |         |
| P8572.00   | US   |      |        |      | F      |       | LW091 | TFW      | 10/004,848<br>12/04/2001 |         |
| Agent: _____ Agent Ref. No: _____<br>TITLE: PATIENT ACTIVATED ADMINISTRATION OF DRUG BOLUS FROM IMPLANTABLE DRUG DELIVERY SYSTEM<br>INVENTORS: Haller, Markus  |      |      |        |      |        |       |       |          |                          |         |
| P8573.00   | US   |      |        |      | F      |       | LW091 | TFW      | 09/727,461<br>12/04/2000 |         |
| Agent: _____ Agent Ref. No: _____<br>TITLE: MEDICAL DEVICE AND METHODS OF USE<br>INVENTORS: Hendriks, Marc   |      |      |        |      |        |       |       |          |                          |         |
| P8580.03   | US   | D    | 01     |      | F      |       | LW091 | TFW      | 09/947,433<br>09/07/2001 |         |
| Agent: _____ Agent Ref. No: _____<br>TITLE: TEMPORARY MEDICAL ELECTRICAL LEAD HAVING BIODEGRADABLE ELECTRODE MOUNTING PAD LOADED WITH THERAPEUTIC DRUG<br>INVENTORS: Lindemans, Fredric W.<br>Gebhardt, Ursula<br>Hendriks, Marc |      |      |        |      |        |       |       |          |                          |         |
| P8623.00   | US   |      |        |      | F      |       | LW091 | TFW      | 09/842,232<br>04/26/2001 |         |
| Agent: _____ Agent Ref. No: _____<br>TITLE: PVC RESPONSE-TRIGGERED BLANKING IN A CARDIAC PACING SYSTEM<br>INVENTORS: Struble, Chester L.   |      |      |        |      |        |       |       |          |                          |         |
| P8722.00   | US   |      |        |      | F      |       | LW091 | TFW      | 09/779,537<br>02/09/2001 |         |
| Agent: _____ Agent Ref. No: _____<br>TITLE: ECHOGENIC DEVICES AND METHODS OF MAKING AND USING SUCH DEVICES<br>INVENTORS: Koullik, Edouard  |      |      |        |      |        |       |       |          |                          |         |
| P8799.00   | US   |      |        |      | F      |       | LW091 | TFW      | 10/127,033<br>04/22/2002 |         |
| Agent: _____ Agent Ref. No: _____<br>TITLE: INSULIN-MEDICATED GLUCOSE UPTAKE MONITOR<br>INVENTORS: Houben, Richard P M   |      |      |        |      |        |       |       |          |                          |         |

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| P8892.00   | US   |      |        |      | F      |       | LW091 | TFW      | 09/727,462<br>12/04/2000 |         |
| Agent: Agent Ref. No:  |      |      |        |      |        |       |       |          |                          |         |
| TITLE: IMPLANTABLE MEDICAL DEVICE TELEMETRY CONTROL SYSTEMS AND METHODS OF USE   |      |      |        |      |        |       |       |          |                          |         |
| INVENTORS: Ferek-Petric, Bozidar   |      |      |        |      |        |       |       |          |                          |         |
| P8936.00   | US   |      |        |      | F      |       | LW091 | TFW      | 10/132,510<br>04/26/2002 |         |
| Agent: Agent Ref. No:  |      |      |        |      |        |       |       |          |                          |         |
| TITLE: CAPTURE MANAGEMENT IN MULTI-SITE PACING   |      |      |        |      |        |       |       |          |                          |         |
| INVENTORS: Ferek-Petric, Bozidar   |      |      |        |      |        |       |       |          |                          |         |
| P8937.00   | US   |      |        |      | F      |       | LW091 | TFW      | 10/126,604<br>04/22/2002 |         |
| Agent: Agent Ref. No:  |      |      |        |      |        |       |       |          |                          |         |
| TITLE: DETECTING COAGULUM FORMATION  |      |      |        |      |        |       |       |          |                          |         |
| INVENTORS: Bick, Olaf J.   |      |      |        |      |        |       |       |          |                          |         |
| P8943.00   | US   |      |        |      | F      |       | LW091 | TFW      | 09/742,118<br>12/22/2000 |         |
| Agent: Agent Ref. No:  |      |      |        |      |        |       |       |          |                          |         |
| TITLE: IMPLANTABLE MEDICAL DEVICE PROGRAMMING WANDS HAVING INTEGRAL INPUT DEVICE   |      |      |        |      |        |       |       |          |                          |         |
| INVENTORS: Ferek-Petric, Bozidar   |      |      |        |      |        |       |       |          |                          |         |
| P8946.00   | US   |      |        |      | F      |       | LW091 | TFW      | 10/132,320<br>04/26/2002 |         |
| Agent: Agent Ref. No:  |      |      |        |      |        |       |       |          |                          |         |
| TITLE: ULTRASONIC SEPTUM MONITORING FOR IMPLANTABLE MEDICAL DEVICES  |      |      |        |      |        |       |       |          |                          |         |
| INVENTORS: Houben, Richard P M<br>Donders, Adrianus P. (Jos)   |      |      |        |      |        |       |       |          |                          |         |
| P8975.00   | US   |      |        |      | F      |       | LW091 | TFW      | 09/449,934<br>11/29/1999 |         |
| Agent: Agent Ref. No:  |      |      |        |      |        |       |       |          |                          |         |
| TITLE: MEDICAL ELECTRICAL LEAD HAVING VARIABLE BENDING STIFFNESS   |      |      |        |      |        |       |       |          |                          |         |
| INVENTORS: Smits, Karel F.A.A.   |      |      |        |      |        |       |       |          |                          |         |
| P8975.03   | US   | D    | 01     |      | F      |       | LW091 | TFW      | 09/947,065<br>09/06/2001 |         |
| Agent: Agent Ref. No:  |      |      |        |      |        |       |       |          |                          |         |
| TITLE: MEDICAL ELECTRICAL LEAD HAVING VARIABLE BENDING STIFFNESS   |      |      |        |      |        |       |       |          |                          |         |
| INVENTORS: Smits, Karel F.A.A.   |      |      |        |      |        |       |       |          |                          |         |
| P9030.00   | US   |      |        |      | F      |       | LW091 | ERW      | 09/535,840<br>03/28/2000 |         |
| Agent: Agent Ref. No:  |      |      |        |      |        |       |       |          |                          |         |
| TITLE: PANCREATIC SECRETION RESPONSE TO STIMULATION TEST PROTOCOL  |      |      |        |      |        |       |       |          |                          |         |
| INVENTORS: Marchal, Benoit   |      |      |        |      |        |       |       |          |                          |         |
| P9073.00   | US   |      |        |      | F      |       | LW091 | TFW      | 09/765,506<br>01/18/2001 |         |
| Agent: Agent Ref. No:  |      |      |        |      |        |       |       |          |                          |         |
| TITLE: MINIATURIZED DRUG DELIVERY DEVICES SYSTEMS AND METHODS  |      |      |        |      |        |       |       |          |                          |         |
| INVENTORS: Haller, Markus<br>Clement, Claude   |      |      |        |      |        |       |       |          |                          |         |
| P9085.00   | US   | P    | 01     |      | F      |       | LW091 | TFW      | 09/765,484<br>01/18/2001 |         |
| Agent: Agent Ref. No:  |      |      |        |      |        |       |       |          |                          |         |
| TITLE: SYSTEM AND METHOD OF COMMUNICATING BETWEEN AN IMPLANTABLE MEDICAL DEVICE AND A REMOTE COMPUTER SYSTEM OR HEALTH CARE PROVIDER |      |      |        |      |        |       |       |          |                          |         |
| INVENTORS: Haller, Markus<br>Donders, Adrianus P. (Jos)<br>Ferek-Petric, Bozidar   |      |      |        |      |        |       |       |          |                          |         |
| P9206.00   | US   |      |        |      | F      |       | LW091 | TFW      | 10/126,516<br>04/22/2002 |         |
| Agent: Agent Ref. No:  |      |      |        |      |        |       |       |          |                          |         |
| TITLE: CARDIAC RESYNCHRONIZATION WITH ADAPTIVE A1-A2 AND OR V1-V2 INTERVALS  |      |      |        |      |        |       |       |          |                          |         |
| INVENTORS: Struble, Chester L.<br>Grandjean, Pierre A.   |      |      |        |      |        |       |       |          |                          |         |

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| P9258.00   | US   |      |        |      | F      |       | LW091 | TFW      | 10/132.509<br>04/26/2002 |         |
| Agent: _____ Agent Ref. No: _____<br>TITLE: ABLATION METHOD AND MEDICAL APPARATUS USING SAME<br>INVENTORS: Ferek-Petric, Bozidar   |      |      |        |      |        |       |       |          |                          |         |
| P9416.00   | US   | P    | 01     |      | F      |       | LW091 | TFW      | 09/764,700<br>01/18/2001 |         |
| Agent: _____ Agent Ref. No: _____<br>TITLE: SYSTEM AND METHOD FOR EMERGENCY COMMUNICATION BETWEEN AN IMPLANTABLE MEDICAL DEVICE AND A REMOTE COMPUTER SYSTEM OF HEALTH CARE PROVIDER<br>INVENTORS: Haller, Markus<br>Ferek-Petric, Bozidar<br>Donders, Adrianus P. (Jos)           |      |      |        |      |        |       |       |          |                          |         |
| P9417.00   | US   | P    | 01     |      | F      |       | LW091 | TFW      | 09/765,218<br>01/18/2001 |         |
| Agent: _____ Agent Ref. No: _____<br>TITLE: SYSTEM AND METHOD OF AUTOMATED INVOICING FOR COMMUNICATIONS BETWEEN AN IMPLANTABLE MEDICAL DEVICE AND A REMOTE COMPUTER SYSTEM FOR HEALTH PROVIDER<br>INVENTORS: Haller, Markus<br>Ferek-Petric, Bozidar<br>Donders, Adrianus P. (Jos) |      |      |        |      |        |       |       |          |                          |         |
| P9418.00   | US   | P    | 01     |      | F      |       | LW091 | TFW      | 09/764,681<br>01/18/2001 |         |
| Agent: _____ Agent Ref. No: _____<br>TITLE: SYSTEM AND METHOD FOR REMOTE PROGRAMMING OF AN IMPLANTABLE MEDICAL DEVICE<br>INVENTORS: Haller, Markus<br>Ferek-Petric, Bozidar<br>Donders, Adrianus P. (Jos)  |      |      |        |      |        |       |       |          |                          |         |
| P9436.00   | US   |      |        |      | F      |       | LW091 | TFW      | 09/842,147<br>04/26/2001 |         |
| Agent: _____ Agent Ref. No: _____<br>TITLE: PRESSURE-MODULATED RATE-RESPONSIVE CARDIAC PACING<br>INVENTORS: Struble, Chester L.  |      |      |        |      |        |       |       |          |                          |         |
| P9437.00   | US   |      |        |      | F      |       | LW091 | TFW      | 10/126,538<br>04/22/2002 |         |
| Agent: _____ Agent Ref. No: _____<br>TITLE: IMPLANTABLE DRUG DELIVERY SYSTEM RESPONSIVE TO INTRA-CARDIAC PRESSURE<br>INVENTORS: Struble, Chester L.  |      |      |        |      |        |       |       |          |                          |         |
| P9440.00   | US   |      |        |      | F      |       | LW091 | TFW      | 09/842,148<br>04/26/2001 |         |
| Agent: _____ Agent Ref. No: _____<br>TITLE: DRUG DELIVERY FOR TREATMENT OF CARDIAC ARRHYTHMIA<br>INVENTORS: Struble, Chester L.  |      |      |        |      |        |       |       |          |                          |         |
| P9463.00   | US   |      |        |      | F      |       | LW091 | TFW      | 10/126,858<br>04/22/2002 |         |
| Agent: _____ Agent Ref. No: _____<br>TITLE: PRESSURE-MODULATED ENERGY LEVEL FOR PACING PULSES<br>INVENTORS: Struble, Chester L.  |      |      |        |      |        |       |       |          |                          |         |
| P9464.00   | US   |      |        |      | F      |       | LW091 | TFW      | 10/126,539<br>04/22/2002 |         |
| Agent: _____ Agent Ref. No: _____<br>TITLE: CARDIAC RESTRAINT WITH ELECTRODE ATTACHMENT SITES<br>INVENTORS: Struble, Chester L.<br>Grandjean, Pierre A.<br>zeijlemaker, Volkert A<br>Smits, Karel F.A.A.   |      |      |        |      |        |       |       |          |                          |         |

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| P9473.00  | US   |      |        | F    |        |       | LW091 | TFW      | 09/879,282<br>06/12/2001 |         |
| Agent:<br>TITLE: DEEP TRENCH SEMICONDUCTOR CAPACITORS HAVING REVERSE BIAS DIODES FOR IMPLANTABLE MEDICAL DEVICES<br>INVENTORS: Houben, Richard P M<br>Weijand, Koen J.  |      |      |        |      |        |       |       |          |                          |         |
| P9475.00  | US   |      |        | F    |        |       | LW091 | TFW      | 10/001,148<br>11/15/2001 |         |
| Agent:<br>TITLE: MYOCARDIAL PERFORMANCE ASSESSMENT<br>INVENTORS: Corbucci, Giorgio  |      |      |        |      |        |       |       |          |                          |         |
| P9491.00  | US   |      |        | F    |        |       | LW091 | TFW      | 09/842,813<br>04/27/2001 |         |
| Agent:<br>TITLE: CLOSED LOOP NEUROMODULATION FOR SUPPRESSION OF EPILEPTIC ACTIVITY<br>INVENTORS: Wadman, Wytse<br>Gielen, Frans L H   |      |      |        |      |        |       |       |          |                          |         |
| P9511.00  | US   |      |        | F    |        |       | LW091 | TFW      | 10/126,537<br>04/22/2002 |         |
| Agent:<br>TITLE: BURR HOLE ASSEMBLY FOR STEREOTACTIC FIXATION OF A BRAIN PROBE<br>INVENTORS: Gielen, Frans L H<br>Cornu, Philippe   |      |      |        |      |        |       |       |          |                          |         |
| P9557.00  | US   |      |        | F    |        |       | LW091 | TFW      | 09/909,999<br>07/23/2001 |         |
| Agent:<br>TITLE: CELL-BASED BIOSENSORS SUITABLE FOR IMPLANTABLE MEDICAL DEVICE APPLICATIONS<br>INVENTORS: Houben, Richard P M<br>Larik, Vincent   |      |      |        |      |        |       |       |          |                          |         |
| P9648.00  | US   |      |        | F    |        |       | LW091 | TFW      | 10/126,522<br>04/22/2002 |         |
| Agent:<br>TITLE: ANTI-TACHYCARDIA PACING BASED ON MULTI-SITE ELECTROGRAMS<br>INVENTORS: Struble, Chester L.   |      |      |        |      |        |       |       |          |                          |         |
| P9711.00  | US   |      |        | L    | F      |       | LW091 | TFW      | 60/371,543<br>04/11/2002 |         |
| Agent:<br>TITLE: METHOD AND APPARATUS FOR AUTOMATIC SHUTDOWN OF HIGH FREQUENCY DELIVERY UPON CATHETER DISLOCATION<br>INVENTORS: Eick, Olaf J.<br>Feron, John C.M.J.   |      |      |        |      |        |       |       |          |                          |         |
| P9774.00  | US   |      |        | L    | F      |       | LW091 | TFW      | 60/333,762<br>11/29/2001 |         |
| Agent:<br>TITLE: TRANS-SEPTAL MEDICAL ELECTRICAL LEADS AND METHODS OF STIMULATING A HEART<br>INVENTORS: Struble, Chester L.<br>Prinzen, Frits W.<br>Smits, Karel F.A.A.<br>Muhlenberg, Lambert<br>Grandjean, Pierre A.<br>Michels, Koen<br>Lokhoff, Nicolaas M. |      |      |        |      |        |       |       |          |                          |         |
| P9781.00  | US   |      |        | F    |        |       | LW091 | TFW      | 10/008,773<br>12/05/2001 |         |
| Agent:<br>TITLE: DIRECTIONAL BRAIN STIMULATION AND RECORDING LEADS<br>INVENTORS: Van Venkooij, Paulus<br>Gielen, Frans L H<br>Mullett, Keith R.<br>Duyssens, Victor<br>Gruia, Dan   |      |      |        |      |        |       |       |          |                          |         |

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| P9897.00   | US   |      |        | F    |        |       | LW091 | TFW      | 10/131,256<br>04/25/2002 |         |

Agent:  
TITLE: ULTRASOUND METHODS AND IMPLANTABLE MEDICAL DEVICES USING SAME  
INVENTORS: Ferek-Petric, Bozidar  
Breyer, Branko

Agent Ref. No:

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| P9929.00 | US |  |  | F |  |  | LW091 | TFW | 10/127,041<br>04/22/2002 |  |
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Agent:  
TITLE: ANTI-SLIP LEADS FOR PLACEMENT WITHIN TISSUE  
INVENTORS: Struble, Chester L.  
Grandjean, Pierre A.  
Smits, Karel F.A.A.

Agent Ref. No:

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